

WHAT IS CLAIMED IS:

① A conductive antioxidant paint comprising a conductive material, an antioxidant material, a polymer emulsion and an inorganic colloid as a binder, and a transition metal; and having a pH value of not more than 9.

2. A conductive antioxidant paint according to claim ① wherein said antioxidant material is previously oxidized.

3. A conductive antioxidant paint according to claim ① wherein said antioxidant material is a carbide or nitride of an element selected from the group consisting of B, Si, Ge, Sb, Ti, Sn, Al and Zr, a boron element or a silicon element.

4. A conductive antioxidant paint according to claim ① wherein said inorganic colloid has an average particle size of not more than 100 nm.

5. A conductive antioxidant paint according to claim ①, wherein said transition metal is at least one element selected from the group consisting of Cr, W, Co, Ti and Ni.

6. A conductive antioxidant paint comprising a conductive material, an antioxidant material, a polymer emulsion and an inorganic colloid as a binder, and a transition metal, the content of alkali metal and/or alkali earth metal being not more than 20% by weight based on the weight of the antioxidant material.

7. A conductive antioxidant paint according to claim 6, wherein said antioxidant material is previously oxidized.

8. A conductive antioxidant paint according to claim 6, wherein said antioxidant material is a carbide or nitride of an element selected from the group consisting of B, Si, Ge, Sb, Ti, Sn, Al and Zr, a boron element or a silicon element.

9. A conductive antioxidant paint according to claim 6, wherein said inorganic colloid has an average particle size of not more than 100 nm.

10. A conductive antioxidant paint according to claim 6, wherein said transition metal is at least one element selected from the group consisting of Cr, W, Co, Ti and Ni.

11. A conductive antioxidant paint comprising a conductive material, an antioxidant material and a binder; and having a total content of aluminum and silicon elements of not more than 1% by weight based on the weight of a solid content of the paint.

12. A conductive antioxidant paint according to claim 11, wherein said antioxidant material is previously oxidized.

13. A conductive antioxidant paint according to claim 11, wherein said antioxidant material is a carbide or nitride of an element selected from the group consisting of B, Si, Ge, Sb, Ti, Sn, Al and Zr, a boron element or a silicon element.

14. A conductive antioxidant paint according to claim 11, further comprising an inorganic colloid having an average particle size of not more than 100 nm.

15. A conductive antioxidant paint according to claim 11, further comprising at least one transition metal selected from the group consisting of Cr, W, Co, Ti and Ni.

16. A graphite electrode coated with the conductive antioxidant paint as defined in claims 1, 6 or 11.